

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S174	1	"6330030".pn. and time	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/05 10:56
S173	1	"6330030".pn. and counter	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/05 10:56
S172	13	S171 and (voltage same time)	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/05 10:56
S171	17	("4563089"   "4710817"   "5065149"   "5214274"   "5373295"   "5452001"   "5461425"   "5468954"   "5565915"   "5576729"   "5650643"   "5665959"   "6166367"   "6201572"   "6330030").PN. OR ("6587145"). URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/05 10:56
S170	1	"6587145".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S169	1	"6587145".pn. and (column row)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S168	1	"6587145".pn. and readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S167	0	"6587145".pn. and (column row) adj readout	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S166	1	"6587145".pn. and digital same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S165	1	"6438257".pn. and digital same sense\$1	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S164	1	"6438257".pn. and digital same sense	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S163	4	"6587145"	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S162	7	S160 and (voltage near1 time) adj conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56

## EAST Search History

S16 1	17	S160 and (voltage near1 time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S16 0	35	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-5777596-\$ or US-5877715-\$ or US-5990948-\$ or US-6021172-\$ or US-6067113-\$ or US-6069377-\$ or US-6330030-\$ or US-6438257-\$ or US-6473122-\$ or US-6498576-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$ or US-6965407-\$).did. or (US-6990219-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S15 9	56	((voltage near1 time) voltage/time voltage\$1time) adj conver\$5 and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 8	19	((voltage near1 time) voltage/time voltage\$1time) adj converter and latch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 7	294	((voltage near1 time) voltage/time voltage\$1time) adj converter	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 6	0	((voltage near1 time) voltage/time voltage\$1time) adj converter and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56

## EAST Search History

S15 5	0	((voltage near1 time) voltage/time voltage\$1time) adj convertor and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 4	54	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3) and pixel\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 3	179	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and ((counter same latch) same clock\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 2	253	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch) and clock	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 1	270	((voltage near1 time) voltage/time voltage\$1time) and (row same column) and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S15 0	287	((voltage near1 time) voltage/time voltage\$1time) and row and column and (counter same latch)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 9	790	((voltage near1 time) voltage/time voltage\$1time) and row and column and count\$3 and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 8	4101	((voltage near1 time) voltage/time voltage\$1time) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 7	8	(S142 S141) and ((voltage near1 time) voltage/time voltage\$1time) and matrix	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 6	2	(S142 S141) and ((voltage near1 time) voltage/time voltage\$1time) and column and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 5	2	(S142 S141) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch and row	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 4	4	(S142 S141) and ((voltage near1 time) voltage/time voltage\$1time) and counter and latch	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56

## EAST Search History

S14 3	12	(S142 S141) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S14 2	115	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S14 1	91	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S14 0	0	10/059488 and amplif\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 9	0	10/059488 and source\$1follower	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 8	0	10/059488 and source	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 7	13	(digital adj pixel) same counter same latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 6	4	fossum.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 5	2	fowler.in. and (digital adj pixel)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 4	38	(digital adj pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 3	26	(analog and digital and pixel).ti.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 2	553	a/d near2 pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 1	2	a/d near2 pixel same row adj select	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S13 0	1	"5471515".pn.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 9	15	fowler.in. and voltage same time and pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56

## EAST Search History

S12 8	154	fowler.in. and voltage same time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 7	22	S122 and (amplifier source)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 6	19	S122 and amplifier	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 5	6	S122 and voltage near2 conver\$5 near2 time	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 4	17	S122 and voltage near2 conver\$5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 3	29	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56

## EAST Search History

S12 2	29	(US-20020118289-\$ or US-20020126215-\$ or US-20020146156-\$ or US-20020181748-\$ or US-20030107666-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20050231624-\$ or US-20060001753-\$).did. or (US-5206632-\$ or US-5877715-\$ or US-5990948-\$ or US-6067113-\$ or US-6069377-\$ or US-6473122-\$ or US-6518910-\$ or US-6525304-\$ or US-6552745-\$ or US-6556935-\$ or US-6580454-\$ or US-6583817-\$ or US-6590610-\$ or US-6600471-\$ or US-6665012-\$ or US-6667769-\$ or US-6727486-\$ or US-6753912-\$ or US-6947087-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S12 1	56	"348"/\$6 and (latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S12 0	216	(latch same counter) and (pixel same time same voltage) and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S11 9	450	pixel and (latch same counter) and time same voltage and row and column	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S11 8	957	pixel and (latch same counter) and time same voltage	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S11 7	2713	pixel and (latch same counter)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 10:56
S11 6	12	(S114 S112) and ((voltage near1 time) voltage/time voltage\$1time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S11 5	15	((satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.) and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56

## EAST Search History

S11 4	115	(hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S11 3	49	(satoshi near1 shigematsu).in. and (hiroki near1 morimura).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S11 2	91	(satoshi near1 shigematsu).in.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S11 1	74	"348"/\$6 and ((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S11 0	251	((voltage\$1 near7 time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 9	826	((voltage\$1 same time\$1) same pixel\$1 same digital) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 8	1296	(voltage\$1 same time\$1) and row and column same pixel\$1 same digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 7	5115	(voltage\$1 same time\$1) and row and column same pixel\$1 and digital	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 6	7332	(voltage\$1 same time\$1) and row and column same pixel	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 5	38611	(voltage\$1 same time\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 4	26	348/302 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 3	48	348/30\$1 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 2	11	348/304 and precision and noise and counter	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 1	76	348/302 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S10 0	34	348/304 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56

## EAST Search History

S99	163	348/30\$1 and precision and noise	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S98	233	348/30\$1 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S97	44	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S96	104	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S95	5	((voltage\$2time\$1)) near2 (converter\$1 conversion\$1) and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S94	3	((voltage\$2time\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S93	159	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) same counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S92	1346	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S91	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S90	324	348/304	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S89	940	348/302	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 10:56
S4	1257	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and row and column	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 13:12
S17 6	229	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4 and (pixel\$1 sensor\$1)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 13:13
S17 5	343	((voltage\$2time\$1) (voltage near1 time) (time\$2voltage\$1)) and counter and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 13:13



## EAST Search History

S17 7	45	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$).did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/05 13:29
S10	41	348/304 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 06:24
S9	98	348/302 and precision	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 06:24
S18 3	418	348/302.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 06:53
S18 2	132	348/304.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 06:53
S18 1	330	348/312.ccls.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 06:53

## EAST Search History

S18 4	45	(US-20020146156-\$ or US-20020181748-\$ or US-20060001753-\$ or US-20050231624-\$ or US-20030107671-\$ or US-20030197799-\$ or US-20030206236-\$ or US-20040017494-\$ or US-20020126215-\$ or US-20020118289-\$ or US-20030107666-\$).did. or (US-5206632-\$ or US-5461425-\$ or US-6556935-\$ or US-6438257-\$ or US-6473122-\$ or US-5565915-\$ or US-6552745-\$ or US-6947087-\$ or US-5777596-\$ or US-6580454-\$ or US-6498576-\$ or US-6665012-\$ or US-5877715-\$ or US-6583817-\$ or US-6990219-\$ or US-6067113-\$ or US-6965407-\$ or US-6330030-\$ or US-6021172-\$ or US-6600471-\$ or US-6069377-\$ or US-6753912-\$ or US-6727486-\$ or US-5990948-\$ or US-6587145-\$ or US-6590610-\$).did. or (US-6518910-\$ or US-6525304-\$ or US-6667769-\$ or US-5650643-\$ or US-5214274-\$ or US-6778212-\$).did. or (EP-1227663-\$).did. or (JP-2002232785-\$).did.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 09:51
S18 5	22	S184 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:00
S18 7	103	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:01
S18 8	26	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time)) and (count\$3) and latch\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:02
S18 9	3	("5325442"   "5577720"   "6259804").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/07/06 10:09
S19 0	3	("6556935").URPN.	USPAT	OR	OFF	2006/07/06 10:14
S18 6	176	fingerprint\$3 and ((voltage\$1 near time) (voltage\$1time))	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:17
S19 2	27	S186 and (voltage-time voltage/time)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:33

## EAST Search History

S19 4	0	(digital adj camera adj for adj machine adj vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:34
S19 3	0	(digital adj camera adj for adj machine adj vision) near3 simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:34
S19 7	22	(digital near2 camera near2 machine near2 vision) and simoni	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:35
S19 6	30	(digital near2 camera near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:35
S19 5	0	(digital near2 camera near2 for near2 machine near2 vision)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:35
S1	1	10/059488	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 10:44
S19 9	1	10/059488 and start\$3	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 11:33
S19 8	0	10/059488 and stagger\$4	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/07/06 11:33